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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,101	10/08/2003	Kanna Tomiye	243647US2S	4460
22850	7590	05/26/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, EUGENE	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/680,101

Applicant(s)

TOMIYE ET AL.

Examiner

Eugene Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29 is/are allowed.
- 6) ☒ Claim(s) 1-12, 25-28 is/are rejected.
- 7) ☒ Claim(s) 13-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/8/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I (claim 1-29) in the reply filed on March 1, 2005 is acknowledged.

Claims 30-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 3/1/05.

### *Claim Objections*

2. Claims 13 thru 24 are objected to because of the following informalities: in line 10, it is unclear whether the limitation "first semiconductor layer" is referring to "a semiconductor layer" in line 5. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 9-10, it is not clear how the gate insulating film is in contact with the first and second sides of the first semiconductor layer since the second side is adjacent to the insulating

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film and does not appear the gate insulating film can physically contact the second side.

Appropriate clarification and/or correction are required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dennison et al. 6,537,891 B1. Dennison discloses (see, for example, FIG. 6) a semiconductor device comprising a buried oxide layer (insulating film) 12, silicon substrate (support substrate) 10, silicon layer (first semiconductor layer) 14, first memory cell, chip memory array region (memory cell), gate (gate electrode) 54, gate oxide (gate insulating film) 52, source/drain areas (first source/drain diffusion layers) 50, semiconductor layer (second semiconductor layer) 14, first peripheral transistor, chip periphery region (peripheral circuit), peripheral transistor gate (third gate electrode) 82, and peripheral gate oxide (gate insulating film) 86. The thickness of the second semiconductor layer is clearly greater than one-third of a length of the peripheral transistor gate 82. Dennison does not expressly disclose the first memory cell constituting a part of a memory cell in an SRAM. However, Dennison does disclose (see, for example, column 4, lines 5-12) the embodiment can be applied to any memory or other semiconductor chip (e.g. SRAM). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention

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to have the first memory cell constituting a part of a memory cell in an SRAM in order to implement different types of memory devices such as an SRAM.

***Allowable Subject Matter***

7. Claims 1 thru 12, and 25 thru 28 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The references of record, either singularly or in combination, do not teach or suggest at least a semiconductor device comprising: a first memory cell constituting a part of a memory cell in an SRAM, and fulfilling an expression such as the thickness of the first semiconductor layer  $\leq$  one-third of a length of the first gate electrode in its channel length direction; a first peripheral transistor constituting a part of a peripheral circuit.

**INFORMATION ON HOW TO CONTACT THE USPTO**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 571-272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eugene Lee  
May 16, 2005

A handwritten signature in black ink, appearing to be 'Eugene Lee', written in a cursive style.